

CRAIG/KLAWOCK HERRING SPAWN-ON-KELP POUND FISHERY  
2003 MANAGEMENT PLAN



By

Ketchikan Commercial Fisheries Management Staff

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## INTRODUCTION

This plan provides an overview of the management approach and regulations for the 2003 spawn-on-kelp pound fishery on the west coast of Prince of Wales Island near the communities of Craig and Klawock in Southeast Alaska. Staff biologists listed at the end of this document are available to answer questions regarding this plan. Pound operators are also advised to review the section of this plan that describes requirements of other agencies.

A closed pound fishery involves releasing sexually mature herring into a net impoundment in which kelp is suspended. The herring are released from the pound after they spawn on the kelp, and the kelp with eggs are then sold. An open pound has suspended kelp attached to the floating structure, but does not impound herring. The floating structure and kelp are placed in areas of active herring spawn.

In the Section 3-B fishery, a closed or an open pound may be operated by a single Commercial Fisheries Entry Commission (CFEC) permit holder, or a pound may be operated by two or more CFEC permit holders. To reduce the amount of gear on the fishing grounds and handling of herring the department has provided an incentive to multiple permit pound operators by giving them a larger allocation of *Macrocystis* blades or fronds.

## STOCK STATUS AND GUIDELINE HARVEST LEVEL

Winter food and bait herring fisheries have occurred in District 3 (Meares Passage and in the Bocas de Finas area) since the 1960s. Seasonal landings from the 1960s through 1985 were small, averaging approximately 210 tons. From 1987–1991 the herring population grew dramatically in Section 3-B with annual guideline harvest levels (GHL) averaging approximately 2,220 tons (Table 1). The herring population has declined in abundance since 1992 with an average GHL of 700 tons. This will be the 12<sup>th</sup> year that the Craig/Klawock herring spawn-on-kelp fishery has occurred. Fishing effort, harvest, spawning, and fishery dates, and product values are summarized in Table 2.

The estimated size of the Craig/Klawock herring population is based upon an age structured analysis (ASA) model. This model incorporates information on spawning biomass and escapement in prior years, annual mortality, growth, fecundity, and recruitment.

Annual harvest levels are based on a graduated scale that allows for higher harvest rates as the herring population increases relative to the threshold level (Figure 1). The established threshold level for the Craig/Klawock stock is 5,000 tons. No harvest is allowed if the biomass estimate for the stock is less than the threshold level. The harvest rate is allowed to increase from 10% at the threshold level to a maximum of 20%. The spawning biomass forecast for the 2003 season is 6,045 tons. This allows for a total GHL of 630 tons for the Craig/Klawock herring spawning stock.

The Board of Fisheries in January of 1997 increased the allocation of herring to the Craig/Klawock spawn-on-kelp pound fishery from an 85/15 allocation between the winter bait fishery and the spring pound

fishery to an allocation of 60/40. Therefore, for the 2003 season, **the guideline harvest level will be 478 tons.** The 2002/2003 winter food and bait fishery the Guideline Harvest Level was 378 tons. A total of 150 tons of the 378 ton winter food and bait fishery was harvested leaving 228 tons of herring to be added to the original 250 tons for the Craig/Klawock herring pound fishery. This gives the Craig/Klawock herring pound fishery a total GHL of 478 tons.

Herring spawning normally occurs in the Craig/Klawock area in mid to late March or early April. The earliest observed spawn since the mid-1970s was March 9 and the latest date of initial spawning has occurred as late as April 3. Traditionally, herring spawn on Fish Egg, Wadleigh, Clam, and Abbess Islands. However, spawning has also been recorded in the area of Portillo Channel, Port Real Marina, the northern shore of San Fernando Island, the Blanquizar Island area, and along the Prince of Wales Island shore at San Christoval Channel and Shinaku Inlet.

## **CALENDAR OF EVENTS**

The following is a calendar of events for the 2003 fishing season:

March 3 - The department will issue a news release announcing the actual harvest of the winter food and bait herring fishery and kelp allocation.

March 17 - Kelp permits will be available.

March 17 - The pound area will be open to the seining of herring effective 12:00 noon.

May 31 - Pounds must be completely removed from the waters of the herring pound fishing area. This includes the area covered by extreme high tides.

## **REGULATIONS**

The Alaska Board of Fisheries met in Sitka in January 2003 and modified the existing regulations for the Section 3-B herring spawn-on-kelp fishery. The management plan can be found in the 2000–2003 Commercial Herring Fishing Regulation book under **5 AAC 27.185 MANAGEMENT PLAN FOR HERRING SPAWN ON KELP IN POUNDS IN SOUTHEASTERN ALASKA AREA.** However, the changes promulgated by the Board will be in effect for the 2003 herring spawn-on-kelp fishery.

### *Ernest Sound*

The Alaska Board of Fisheries met in Sitka in January 2003 and created a new herring spawn-on-kelp fishery in Ernest Sound (District 7). However, spawning in 2002 did not produce the minimum threshold level of spawn necessary to have any commercial fishery during the 2002–2003 herring season (Table 3.). Any future fishery would be dependent upon the stock exceeding the 2,500 ton minimum threshold level. When the stock does exceed that level, the board decided that any herring spawn-on-kelp-fishery would be dependent upon several factors. For a spawn-on-kelp fishery to occur, there needs to be at least 50 tons of harvestable biomass left over after the winter bait fishery had a chance to harvest 90% of the guideline harvest level and the herring bait pounds had a chance to obtain permits for 10% of the guideline harvest level.

Changes that occurred during the 2003 Board of Fisheries meeting that directly effect the Section 3-B fishery are as follows:

1. The kelp allocation table found under **5 AAC 27.185 MANAGEMENT PLAN FOR HERRING SPAWN ON KELP IN POUNDS IN SOUTHEASTERN ALASKA AREA.**

(c) In Section 3-B, the kelp allocation is as follows:

Guideline Harvest Range for Herring (tons)	Single Permit Closed Pounds	Double-Permit Closed Pounds	Triple-Permit Closed Pounds	Single Permit Open Pounds	Multiple Permit Open Pounds
200 – 599	200 blades	400 blades	550 blades	100 fronds or 1,000 blades	300 fronds or 3,000 blades
600 – 799	250 blades	450 blades	675 blades	150 fronds or 1,500 blades	450 fronds or 4,500 blades
800 – 999	300 blades	600 blades	900 blades	200 fronds or 2,000 blades	600 fronds or 6,000 blades
1, 000 or more	350 blades	750 blades	1,125 blades	250 fronds or 2,500 blades	750 fronds or 7,500 blades

2. After the last herring has been placed into the pounds, **two pounds** of two or more CFEC permit holders may drop a wall of their respective pounds to allow herring to swim between two connected pounds. The CFEC permit holders must notify the department representative prior to joining their pounds. Additional herring may not be allowed into the pounds once the two of them are joined.

If two pounds are joined the regulation that allows for a retention of herring for six days will be enforced on the pound which first had herring placed into the structure. Only two pounds can be joined together.

3. For the purpose of this fishery a closed pound is considered to be fishing once herring have been introduced into the closed pound structure; a closed pound is considered to have stopped fishing once all of the herring have been released and all of the spawn-on-kelp product has been removed from the closed pound structure.

4. For the purpose of this fishery an open pound is considered to be fishing once kelp has been attached to the open pound structure; an open pound is considered to have stopped fishing once all of the spawn-on-kelp product has been removed from the open pound structure.

### **LIMITED ENTRY**

In 1998 the Commercial Fisheries Entry Commission placed all Southeast Alaska's herring spawn-on-kelp pound fisheries under limited entry. For the Craig/Klawock fishery 229 permits were issued. Questions regarding eligibility for this fishery should be directed at the Alaska Commercial Fisheries Entry Commission.

### **KELP HARVEST AND ALLOCATION**

According to **5 AAC 37.100 PERMITS** a permit is required to harvest kelp to be used in the pounds. Kelp permits may be pooled and one or more individuals can harvest for a group of pound operators. Kelp permits may be obtained from the department's office in Ketchikan or in Craig and must be completed and returned to the department by May 15, 2003.

The department will manage the fishery based on a division of kelp blades or fronds between permit holders. The department recognizes that kelp management alone has not been effective in limiting the harvest of herring and staying within the herring GHL set for the fishery. The department has attempted to rectify this problem by allowing the use of multiple-permit pounds thereby reducing the numbers of pounds on the grounds. This should lead to the reduction in the harvesting, impounding, and the associated mortality of herring. The department's method of encouraging multiple permit pounds and open pounds has been a kelp incentive, that is allowing a greater number of kelp blades per permit holder for multiple permit pounds and open pounds.

The amount of kelp for the various types of pounds is now defined in the new management plan. Permit holders can now determine their kelp allocation by looking at the kelp allocation table in the management plan. When the permit holder decides what type of pound they want to use they can determine the amount of kelp blades or fronds they can use in the fishery. The final GHL level for the fishery is 478 tons.

## FISHERY CONDUCT AND MANAGEMENT

Suitable sites for pounds in the Craig/Klawock area are limited. To avoid herring mortality and damage to the pounds, operators should locate their pounds in an area with minimal exposure to wind and wave action, and with a relatively deep bottom. The distance from where the herring are captured and the pound site should also be considered since long towing distances can cause considerable stress and mortality of herring.

In past years a completed closed pound had to be on the grounds by mid-March in order for the permit holder to participate in the fishery. For the 2003 season there will not be a deadline when pounds have to be placed on the grounds. Pounds must be operational by the time herring and kelp are introduced.

All permit holders involved in the operation of a pound, whether single or multiple permit pound, must be physically present at their pound fishing site at all times during the *operation of the pound*. *Operation of the pound* is defined as 1) the placement of kelp into the pound structure, 2) the capture and transfer of herring into the pound, 3) the collection and sale of herring spawn-on-kelp product produced in the pound, and 4) all permit holders should be present when two pounds are put together.

For multiple permit closed pounds all permit holders assigned to the pound must be present at their pound site when kelp and herring are introduced into the pound. If only one permit holder is present at this time then that pound must be operated for the remainder of the season as a single permit closed pound and no more than the number of blades of kelp allocated to a single closed pound may be harvested.

The department will be closely monitoring herring activity in the Craig/Klawock area by vessel and aerial surveys. Kelp permits will be available starting Monday, March 17, 2003. **Herring for placement in closed pounds may be captured starting at 12:00 noon on March 17 in Section 3-B.** Daily fishing periods will be announced on the fishing grounds. The department will give sufficient notice of the open fishing time so that all fishers are given a fair opportunity to capture herring. Limiting seining to daylight hours may be necessary to control the amount of herring available for harvest and reduce the amount of improper handling of herring that may occur during nighttime seine operations. The department recommends that the size of the sets should be small with no more than 10 tons of herring harvested at one time.

Pound operators are advised to use extreme caution when towing herring from the capture site to the pound site since towing can be a source of significant mortality if not conducted properly. To avoid mortality, the transport of herring to the pound site must be done with the pound itself or a towable net pen. Towable net pens used only for transporting herring must be marked "Tow Pound." **Transporting herring with a purse seine is discouraged due to increased mortality with the captured herring.** Pound operators are also advised to **push** pounds or to tow alongside of the transfer pound to avoid crushing herring against the net in the prop wash.

Pound operators may change the type of pound they are using up to the time herring or kelp is introduced into the pound. They must inform the department of the change.

All fishery announcements, including updates of herring activities and fishery openings, will be broadcast by VHF radio, Channel 10. Fishers are strongly encouraged to have a VHF radio.



## **HARVEST AND PRODUCTION**

Each permit holder's spawn on kelp blades or fronds must remain separate from other permit holder's spawn on kelp blades or fronds until after processing. Permit holders will be allowed to harvest **all** of their herring spawn on kelp product produced in their pounds. A permit holder's fish ticket must report only their spawn on kelp harvested from their pound.

## **REQUIREMENTS FOR BUYERS**

Buyers, permit holders, and processors of spawn on kelp product should read and become familiar with the requirements for the reporting of kelp product. These requirements can be found in **5 AAC 27.187 BUYER AND PROCESSORS REPORTING REQUIREMENTS FOR SPAWN ON KELP IN POUNDS FOR THE SOUTHEASTERN ALASKA AREA.**

Operators of floating processing vessels will be required to report in person or by telephone, to the Alaska Department of Fish and Game office in Ketchikan before the start of processing operations in the Craig/Klawock fishery. These reporting requirements are specified by regulation **5 AAC 39.130 (f).**

## **LICENSE REQUIREMENTS**

Operators must obtain a 2003 entry permit (L21C) from the CFEC. Individuals who do not have CFEC permit, but are assisting in the operation of the fishery in any manner, must have a 2003 crew member license. All commercial vessels used in the fishery (including skiffs) are required to have a 2003 vessel license with the CFEC. Fishers are required to display the permanent vessel license plate (ADF&G number) on both sides of the hull, cabin, or mast in permanent symbols at least 12-inches high and with lines at least one-inch wide that contrast with the background.

Applications for vessel and CFEC permits are available from all offices of ADF&G or they can be obtained by writing the Commercial Fisheries Entry Commission, 8800 Glacier Hwy #109, Juneau, Alaska 99801-8079. **Fishers are reminded to apply for all licenses well in advance of the fishery.** Crew member licenses may be obtained from local vendors in most communities.

## **REQUIREMENTS OF OTHER AGENCIES**

Prospective pound operators are advised to consider the requirements that other agencies may have to construct and operate pounds in the Craig/Klawock fishery. Pound operators are urged to contact the Alaska Department of Natural Resources (DNR) (907-465-3400), the U.S. Forest Service (907-826-3271), the National Marine Fisheries Service (NMFS) (907-747-6940), and the United States Coast Guard (907-228-0340) to determine other requirements or restrictions.

### ***United States Coast Guard***

Structures such as floating fish pens are subject to the requirements of the Code of Federal Regulations, Title 33, Part 64. This regulation requires an owner to apply for a Coast Guard permit and to install and maintain a light or other private aid to navigation if the Coast Guard determines it to be necessary to protect maritime navigation.

The proposed pens of the Craig/Klawock spawn-on-kelp pound fishery do not require permits for private aids to navigation at this time, provided the owners:

1. Place two signs on opposite corners of the structure. These signs will be worded "Danger, Fish Pens" (Figure 5).
2. Place a single, all-points white light on one corner of structures less than 400 square feet in size.
3. Place a single, all-points white light on every corner of structures larger than 400 square feet in size.
4. Anchor fish pens within the boundary area specified by this permit.

If all these conditions are not met, the permit holder must apply to the Coast Guard for an individual "Private Aids to Navigation Permit." If you have questions, call the Coast Guard Aids to Navigation office, at 463-2245.

## **PRIVATE LANDS**

Some of the area in which pounds may be operated is adjacent to privately owned lands. Pound operators should contact the landowners if they intend to use any of that land above mean high tide. Private land owners include the Klawock/Heenya Corporation, Shaan-Seet Corporation, and Sealaska Corporation. Figure 3 shows the approximate areas of privately held lands in the Craig/Klawock area.

Table 1. Craig/Klawock stock size and bait harvests, 1987–2002.

YEAR	MILES OF SPAWN (year)	BIOMASS (TONS)	BAIT QUOTA (TONS)	BAIT HARVEST (TONS)
87-88 <sup>a</sup>	5.0 ('87)	3,080	2,200	2,014
88-89	27.0 ('88)	16,350	1,810	1,730
89-90	31.7 ('89)	19,800	3,150	3,221
90-91	30.0 ('90)	18,350	2,841	3,272
91-92	22.0 ('91)	17,800	2,281	2,295
92-93 <sup>b</sup>	23.0 ('92)	12,350	1,362	629
93-94	8.4 ('93)	7,996 (ASA)	760	636
94-95	8.0 ('94)	6,778 (ASA)	617	124
95-96	5.5 ('95)	6,262 (ASA)	558	34
96-97	9.9 ('96)	6,755 (ASA)	615	517
97-98 <sup>c</sup>	13.2 ('97)	7,018 (ASA)	455	254
98-99	11.0 ('98)	6,951 (ASA)	450	254
00-01	12.9 ('00)	9,091 (ASA)	635	150
01-02	16.7 ('01)	8,387 (ASA)	571	100

<sup>a</sup> Reduced to 1,600 tons on the grounds.

<sup>b</sup> First year bait quota was split between pound fishery 85%:15%.

<sup>c</sup> Herring allocation changed to 60% for the winter food and bait fishery, 40% to the pound fishery.

Table 2. Craig/Klawock herring roe-on-kelp fishery summaries, 1992–2001.

FISHERIES INFORMATION	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Herring quota (tons)	403	240	135	109	100	200 <sup>a</sup>	500 <sup>b</sup>	650 <sup>c</sup>	280 <sup>d</sup>	913 <sup>i</sup>
Product quota (tons)	32.3	19.2	10.8	8.7	8.0	8.0	40	52	22.4	N/A
Total harvest (tons)	25.7	5.7	16.5	25.4	37.25	23	22.4	36	0	27.2
Exvessel value	\$180,000	\$47,882	\$364,199	\$1,000,000	\$1,490,000	\$270,306	\$152,203	\$212,121	\$0	\$146,859
Aver. Price/pound	\$3.50	\$4.17	\$11.00	\$19.00	\$20.00	\$6.00	\$3.39	\$2.94	\$0	\$2.70
Aver. Income/landing	\$784.70	\$2,081.00	\$4,388.00	\$5,107	\$9,700	\$1,890	\$1,072	\$2,060	\$0	\$2,880
Number of applicants	531	389	257	241	195	218	170	161	164	N/A
Number of pounds in fishery	248	209	147	159	162	119	112	70	50	31
Number of landings	229	23	83	146	154	143	148	103	0	51
Herring allocation (tons)	1.6	1.15	1	0.7	0.6	0.7	4.46	N/A	N/A	N/A
Blade quota (tons)	8.0	6.4	3.75	2.9	2.67	2.6	13	9.1	7.4	N/A
Blade allocation	310	292	233	174	156	<sup>e</sup>	<sup>f</sup>	<sup>g</sup>	<sup>h</sup>	<sup>j</sup>
Total kelp harvest (tons)	7.8	3.7	3.0	3.0	2.6	3.2	3.47	2.9	2.0	3.2
Herring spawning dates	3/15 – 4/10	3/26 – 4/21	3/23-4/12	3/27-4/9	3/22-4/12	4/7-4/14	3/19-4/8	3/23-3/28	3/22-4/5	4/1-4/7
Miles of spawn	22.0 ('91)	23.0 ('92)	8.4 ('93)	8.0 ('94)	5.5 ('95)	9.9 ('96)	13.2 ('97)	12.5 ('98)	15.4 ('99)	12.9 ('00)
Stock biomass (tons)	17,800	12,350	7,996	6,778	6,262	6,755	7,018	6,951	6,013	9,591
Seining opened/closed	3/18 – 3/23	4/17 - 4/28	4/5-4/18	3/28-4/14	3/28-4/14	3/17-4/20	3/17-4/20	3/17-4/21	3/17-5/1	3/17-4/24

<sup>a</sup> 100 tons added on to original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

<sup>b</sup> 200 tons added on to original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

<sup>c</sup> 350 tons added on to original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

<sup>d</sup> 30 tons added onto original pound GHL from unharvested winter food and bait herring fishery in Section 3-B.

<sup>e</sup> 100 blades for single-closed pound, 150 blades for multiple pound permit holder, and 300 blades for open pound permits.

<sup>f</sup> 120 blades for a single closed pound, 180 blades for a multiple pound permit holder, 360 blades for single open pound, and 400 blades for a multiple permit open pound.

<sup>g</sup> 155 blades for a single closed pound, 235 blades for a multiple pound permit holder, 470 blades for a single open pound, 520 blades for a multiple permit open pound.

<sup>h</sup> 70 blades for a single closed pound, 210 for a multiple pound permit holder, 700 blades for a single open pound, 2,100 blades for a multiple permit open pound.

<sup>i</sup> 485 tons added on to the original pound GHL from the unharvested winter food and bait herring fishery in Section 3-B.

<sup>j</sup> 200 blades - single closed pound, 600 blades – per permit holder multiple closed pound, 200 fronds or 2,000 blades – single open, 600 fronds or 6,000 blades for multiple permit open pound.

Table 3. Ernest Sound miles of herring spawn, stock size, and harvests.

Season	Nautical Miles of Spawn	Spawning Biomass (tons)*	Guideline Harvest Level (tons)	Bait Harvest (tons)	Sac Roe Harvest	Remaining Guideline Harvest Level (tons)	Minimum Threshold Level (tons)
1969-70	--		--	17	--		
1970-71	3			206	--		
1971-72	--	13,100		967	--		
1972-73	--	3,550		711	--		
1973-74	--	450		535	--		
1974-75	--	400		593	--		
1975-76	3	2,900	580	708	--		
1976-77	3	4,350	870	901	49		2,500
1977-78	--	3,035	455	340	--		2,500
1978-79	2.6	1,505	--	--	--	--	2,500
1979-80	4	255	--	--	--	--	2,500
1980-81	3.5	410	--	--	--	--	2,500
1981-82	--	160	--	--	--	--	2,500
1982-83	--	1,640	--	--	--	--	2,500
1983-84	--	1,000	--	--	--	--	2,500
1984-85	4.5	1,000	--	--	--	--	2,500
1985-86	--	1,000	--	--	--	--	2,500
1986-87	1	--	--	--	--	--	2,500
1987-88	2	--	--	--	--	--	2,500
1988-89	2.4	500	--	--	--	--	2,500
1989-90	2.1	1,000	--	--	--	--	2,500
1990-91	ns	3,000	--	--	--	--	2,500
1991-92	9.1	2,650	--	--	--	--	2,500
1992-93	9	684	200	8	--	192	2,500
1993-94	8.4	2,544	0	--	--	--	2,500
1994-95	6.5	2,744	255	111	--	144	2,500
1995-96	6.9	4,852	280	220	--	60	2,500
1996-97	0	-No survey-	577	6	--	571	2,500
1997-98	11	5,381	0	--	--	--	2,500
1998-99	2.4	No survey--	662	96	--	566	2,500
1999-00	9.1	894	0	--	--	--	2,500
2000-01	6.9	2,051	0	--	--	--	2,500
2001-02	4.8	2,407	0	--	--	--	2,500

\* 1970 through 1990 biomass estimates were based on hyrdo-acoustic surveys.

1991 through 2001 biomass estimates calculated from spawn deposition estimates or biomass accounting calculations.

1973-74, 1974-75, 1976-77 also include harvests from Fools and Menefee Inlets.

1975-76 & 1976-77 GHL's are based upon 20% of the acoustical estimate.

1977-78 GHL is based upon 15% of the acoustical estimate (11/28/77 memo by WB).

1996-97 No survey, fish all spawned (7.5 miles) along Ship Island.

1998-99 No survey, only 2.4 miles of spawn observed, probably missed main spawn.

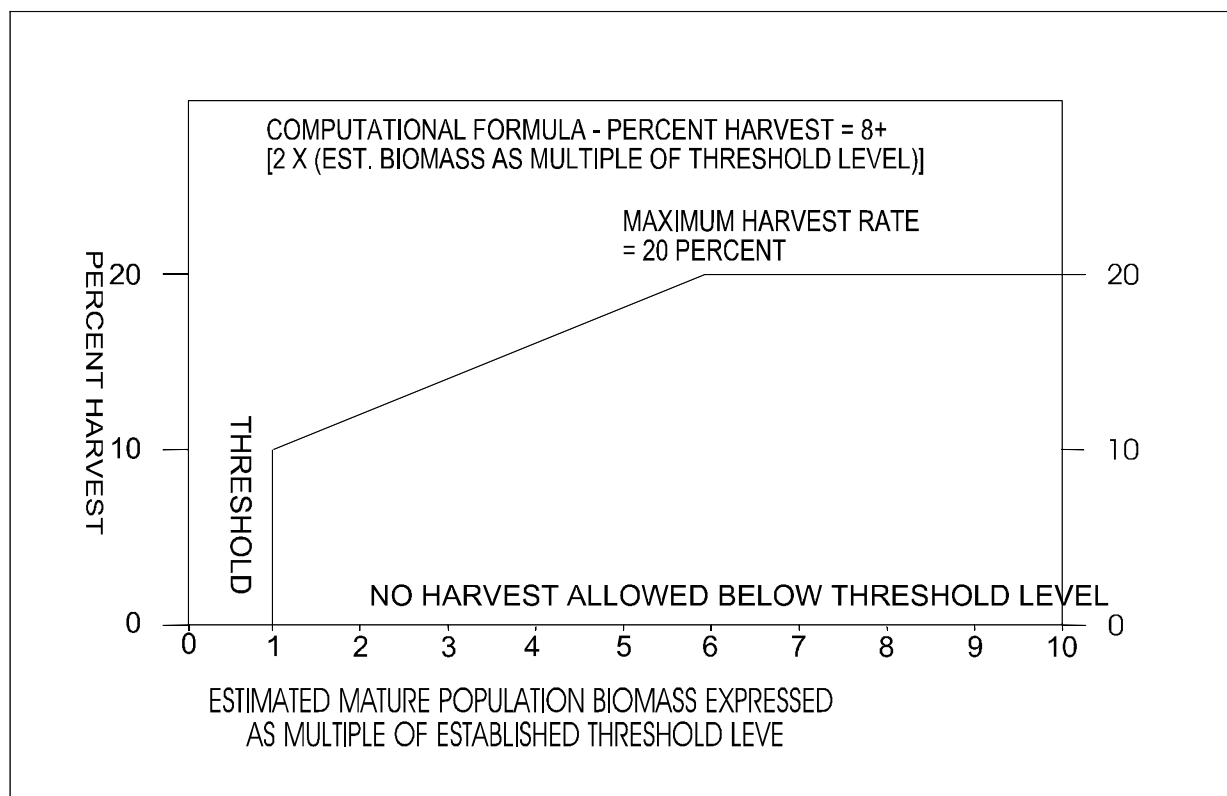


Figure 1. Generalized harvest strategy for Southeast Alaska herring stocks showing allowable percent annual harvest related to estimated biomass of mature stock expressed as a multiple of the established harvest threshold level.

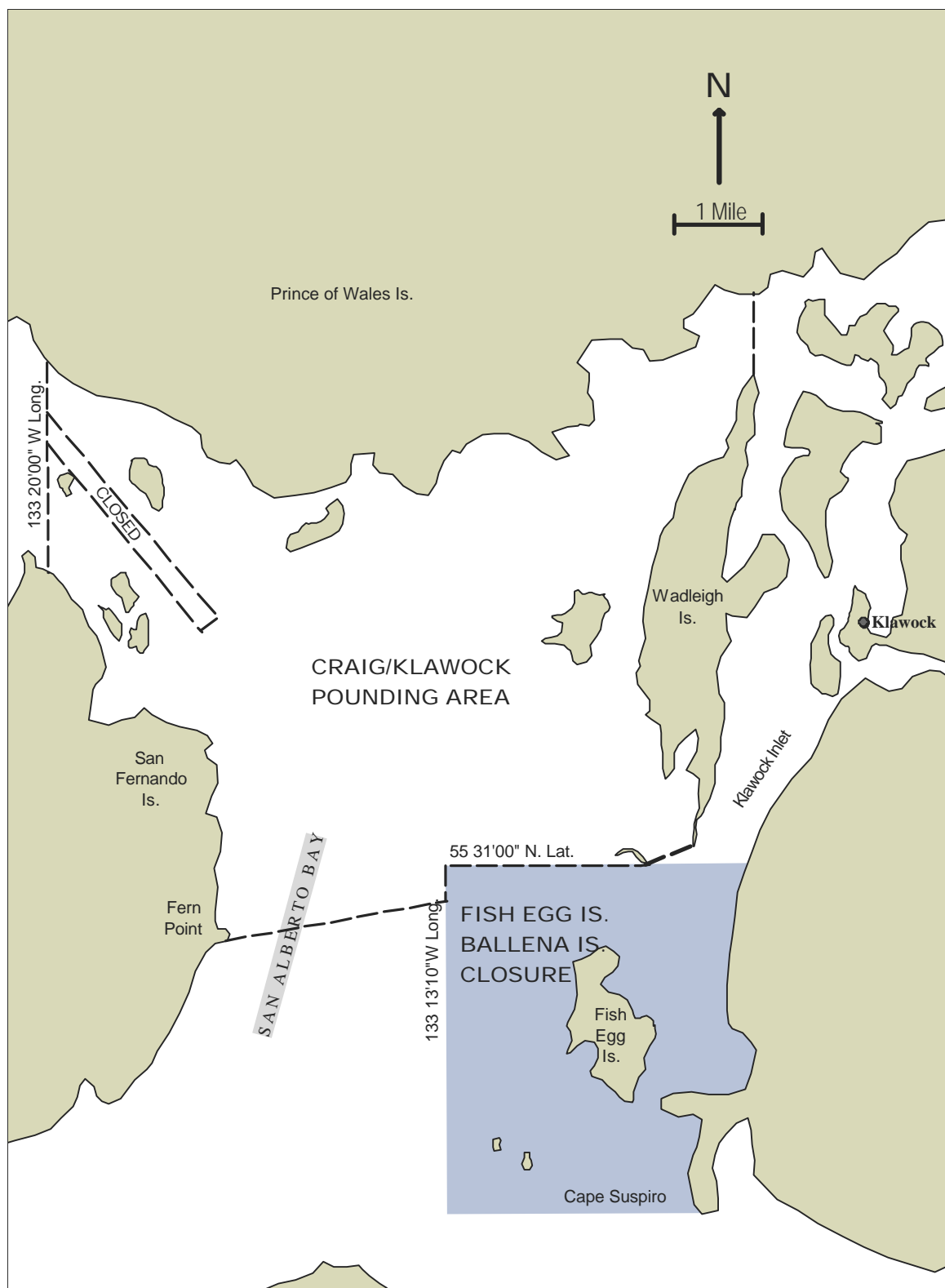


Figure 2. Open area for Craig/Klawock pound fishery.



Figure 3. Private lands in the Craig/Klawock area.



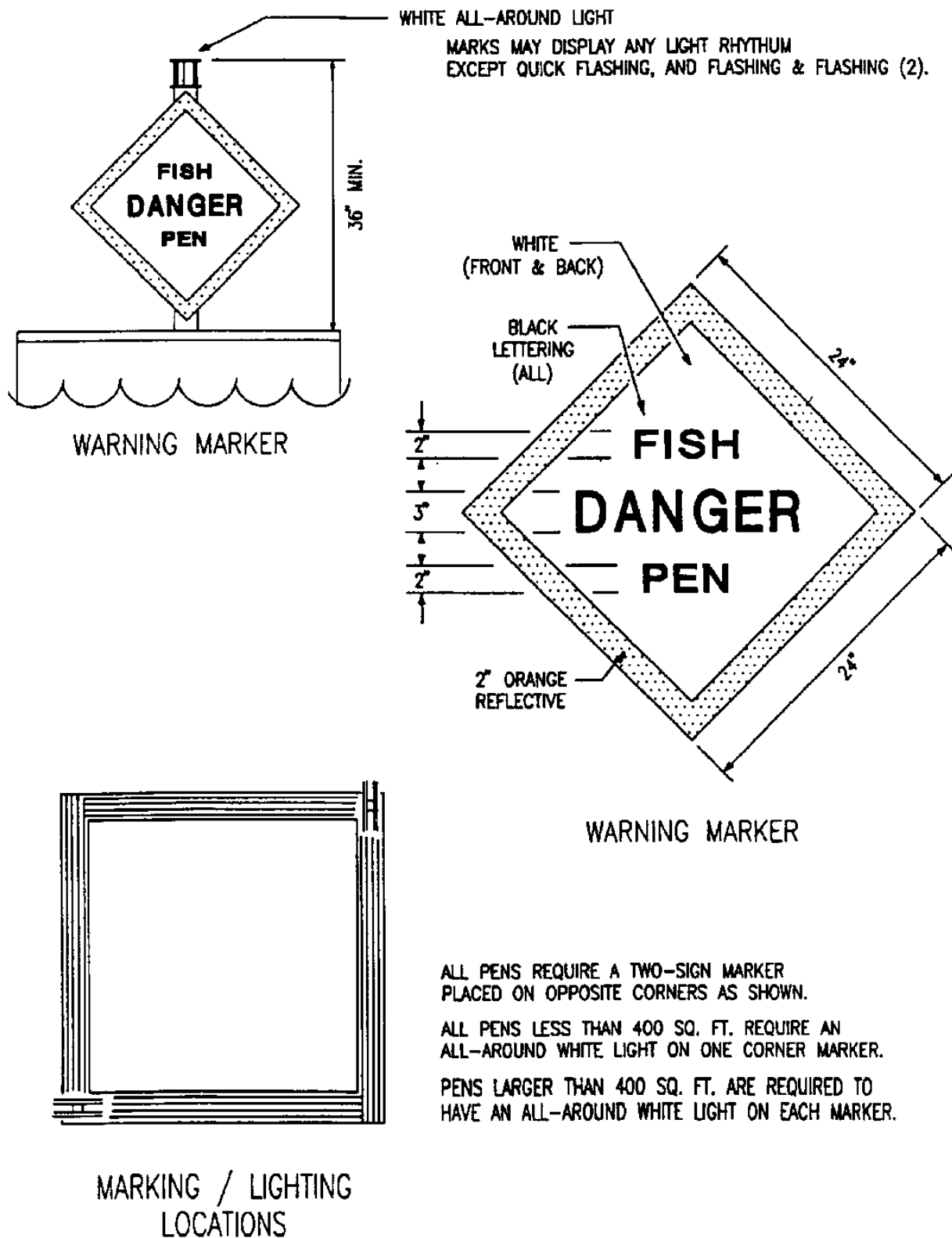


Figure 4. Coast Guard requirements for marking ponds.

## LIST OF MANAGEMENT CONTACTS

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During the herring spawn-on-kelp pound fishery information may also be obtained from the Fish and Game Office in Craig, Alaska, located at Suite 302 Westwind Plaza, telephone number 1-907-826-2563.

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